

Appl. No. 09/787,853
 Atty. Docket No. 7713
 Amdt. dated 04/22/2003
 Reply to Office Action of 11/18/02

AMENDMENTS TO THE CLAIMS

Claim 1. (*Amendment*) 1. A granular detergent composition having an average bulk density of at least about 400 g/L and comprising particles, at least about 90% of said particles having a mean particle diameter in the range from about 700 microns to about 1000 microns, with a geometric standard deviation from about 1.0 to about 1.4, said particles having a circularity less than about 50 and an aspect ratio less than about 2, said composition being characterized by a rate of dispersion as defined by the equation:

$$R = R^* + (1 - R^*) \exp \left(- \left(\frac{t}{DT(t_{wash})} \right)^m \right)$$

where R is the residual undissolved detergent at any point in time, t, R* is the long term residual undispersed detergent having a value of less than about 14% of the total amount of an initial dosage of detergent, t is any single point in time, m is a stretching exponent having a value of less than about 2, DT is dispersion time having a value of less than about 0.5 and t_{wash} is the time of the wash cycle.

Claim 2. The granular detergent composition as claimed in Claim 1 wherein at least 90% of the insoluble residues of the granular detergent composition have an average particle size of less than about 10 μ m.

Claim 3. The granular detergent composition as claimed in Claim 1 wherein R* has a value of less than about 7%, m has a value of less than about 1.5 and DT has a value of less than about 0.25.

Claims 4. The granular detergent composition as claimed in Claim 3 wherein R* has a value of less than about 3.5%, m has a value of less than about 1 and DT has a value of less than about 0.12.

Claim 5. (*Amended*) The granular detergent composition as claimed in Claim 1 wherein said detergent composition has a rate of dissolution as defined by the equation:

$$U = U^* + (1 - U^*) \exp \left(- \left(\frac{t}{RT(t_{wash})} \right)^n \right)$$

where U is the fraction of undissolved surfactant at any point in time, t, U* is the long term ~~surfactant~~ residual undissolved surfactant having a value of less than about 14% of the total amount of an initial dosage of surfactant, t is any single point in time, n is a stretching exponent

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having a value of less than about 2, RT is dissolution time having a value of less than about 0.5 and t_{wash} is the time of the wash cycle.

Claim 6. (*Amended*) The granular detergent composition as claimed in Claim 5 [4] wherein U^* has a value of less than about 7%, n has a value of less than about 1.5 and RT has a value of less than about 0.25.

Claim 7. (*Amended*) The granular detergent composition as claimed in Claim 6 [5] wherein U^* has a value of less than about 3.5%, n has a value of less than about 1 and RT has a value of less than about 0.12.

Claim 8. The composition as claimed in Claim 7 wherein said composition has insoluble residues and at least about 90% of said insoluble residues have a particle size of less than 15 μm .